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CLAIMS:

1. Spherical particles for thermal spraying, consisting essentially of a rare earth(inclusive of yttrium)-containing compound and having a breaking strength of at least 10 MPa and an average particle diameter of 10 to 80 μm .
2. Spherical particles for thermal spraying, consisting essentially of a rare earth(inclusive of yttrium)-containing compound and having a bulk density of at least 1.0 g/cm³, an aspect ratio of up to 2, and a cumulative volume of pores with a radius of up to 1 μm which is less than 0.5 cm³/g.
3. The spherical particles of claim 2 having a particle size distribution in which a particle diameter D90, D50 and D10 corresponds to 90 vol%, 50 vol% and 10 vol% accumulation, respectively, wherein D90 is up to 100 μm and the ratio of D50 to a Fisher diameter is up to 5.
4. The spherical particles of claim 3 wherein D10 is at least 5 μm , and the particles have a dispersion index of up to 0.6.
5. The spherical particles of claim 1 wherein said rare earth-containing compound is a rare earth oxide or rare earth compound oxide.
6. The spherical particles of claim 2 wherein said rare earth-containing compound is a rare earth oxide or rare earth compound oxide.
7. A thermal sprayed component comprising a substrate having a surface and a coating of the rare earth-containing compound particles of claim 1 thermally sprayed to the substrate surface.

8. A thermal sprayed component comprising a substrate having a surface and a coating of the rare earth-containing compound particles of claim 2 thermally sprayed to the substrate surface.

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